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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,775	09/05/2000	Atsushi Tanaka	862.C1998	8807

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EXAMINER

STOCK JR, GORDON J

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/655,775

Applicant(s)

TANAKA ET AL.

Examiner

Gordon J Stock

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
- 7) ☒ Claim(s) 4 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 March 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on March 5, 2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Objections

2. **Claim 4** is objected to for the following: the phrases, “second sensing means” and “first sensing means,” lack antecedent basis. Corrections are required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3, 6, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morishita et al. (5,627,565)** (cited by Examiner in previous action).

As for **claim 1**, Morishita in a space coordinates detecting device and input apparatus using same discloses the following: a plurality of sensing means, arranged in one coordinate axis, for sensing the beam spot (col. 9, lines 60-65; col. 10, lines 1-5); correction means for correcting results of sensing from each of said plurality of sensing means (col. 13, lines 5-67); concatenation means for concatenating data that has been corrected by said correction means (Fig. 11b); output means for outputting coordinate values corresponding to the beam spot based

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upon the data concatenated by said concatenation means (Fig. 11b; cols. 11-12); wherein portions of areas from which said plurality of sensing means sense light overlap (Fig. 3, col. 10, lines 45-67; cols. 11-12).

Morishita also discloses a third embodiment comprising means as disclosed above as in the first embodiment (Figs. 13-19; col. 18, lines 10-67; cols. 19-22; col. 23, lines 1-20).

In addition as for the concatenation means, since a two dimensional coordinate is derived, it would be obvious to one skilled in the art at the time the invention was made that the embodiments comprise concatenation means in order to link the x and y coordinate outputted.

As for **claim 3**, Morishita discloses everything as above (see **claim 1**). In addition, Morishita discloses the plurality of sensing means of the first embodiment comprises a plurality of optoelectronic transducer arrayed on a straight line (Fig. 3, Fig. 11a, Fig. 11b; col. 9, lines 60-65; col. 10, lines 1-5).

As for **claim 6**, Morishita discloses the following: a correction step of correcting results of sensing from each of a plurality of sensing units, arranged in one coordinate axis, for sensing the beam spot (col. 9, lines 60-65; col. 10, lines 1-5; col. 13, lines 5-67); concatenation step of concatenating data that has been corrected by said correction step (Fig. 11b); output step of outputting coordinate values corresponding to beam spot upon data concatenated (Fig. 11b; cols. 11-12); wherein portions of areas from which said plurality of sensing means sense light overlap (Fig. 3, col. 10, lines 45-67; cols. 11-12).

In addition as for the concatenation step, since a two dimensional coordinate is derived, it would be obvious to one skilled in the art at the time the invention was made that the method comprised a concatenation step in order to link the x and y coordinate outputted.

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As for **claim 8**, Morishita discloses everything as above (see **claim 6**). In addition, Morishita discloses the plurality of sensing units comprises a plurality of optoelectronic transducers arrayed on a straight line (Fig. 3, Fig. 11a, Fig. 11b; col. 9, lines 60-65; col. 10, lines 1-5).

5. **Claims 2, 5, 7, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morishita et al. (5,627,565)** in view of **Elrod et al. (5,341,155)** (both references cited by Examiner in previous action).

As for **claims 2 and 7**, Morishita discloses everything as above (see **claims 1 and 6**). However, Morishita is silent concerning the correction means based upon stored reference coordinate values. Morishita does teach that his apparatus may comprise an AV apparatus (col. 8, lines 50-56). And Elrod in a large area display system's position location indicator correction teaches using reference coordinate values, calibrated values, for correcting screen coordinate values (col. 2, lines 55-67; col. 3, lines 1-50). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the correction means and correction step be based on stored reference data in order to correct the screen coordinate from the input data coordinates.

As for **claims 5 and 10**, Morishita discloses everything as above (see **claims 1 and 6**). In addition, Morishita discloses correcting the coordinates based on position to the screen (col. 13, lines 5-67) which would be a magnification correction due to the size of the beam in relation to the position from the screen. In addition, Elrod in a method of correction of a position location indicator teaches using a table of calibration data as well as a spline function data to correct screen coordinates due to nonlinearity of the detector response with the screen (col. 3, lines 1-50;

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cols. 10-17). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the correction means and step to correct the screen coordinate through calibration data and a spline function as taught by Elrod to correct for nonlinearities between the screen and the input data. In addition, it would be obvious to one skilled in the art at the time the invention was made that magnification would be corrected for the calibration table and use of the spline function corrects the screen coordinates in respect to the input data coordinates which are dependent on the size of the detector's pixels and the position of the detector.

6. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morishita et al. (5,627,565)** in view of **Ohouchi et al. (4,959,805)** (Morishita reference cited by Examiner in previous action).

As for **claim 11**, Morishita discloses the steps and the portions of areas from which the plurality of sensing units receive light overlap as above (see **claim 6**). In addition, Morishita discloses the system may comprise a computer (col. 8, lines 50-55) and comprises a digital operation unit (Fig. 11b, 48). Morishita is silent concerning programming code comprising the method steps. The Examiner takes Official Notice that program code is well known in the art for controlling computer processes. Ohouchi in a coordinate detecting device teaches that the computer processing capabilities are required for almost all processings for coordinate input apparatus (col. 1, lines 30-40). Therefore, it would be obvious to one skilled in the art to have the method steps from above (see claim 6) be in program code in order for the computer to control the processing of the coordinate input apparatus system.

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7. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morishita et al. (5,627,565)** in view of **Sato et al. (6,114,685)** (Morishita reference cited by Examiner in previous action).

As for **claim 12**, Morishita discloses everything as above (see **claim 1**). In addition, Morishita in his third embodiment discloses a linear array of sensing means (Fig 14, 107 and 108), two pin photodiodes (col. 18, 53-55). Morishita is silent concerning pixels. Sato in a solid-state radiation detector teaches that pin photodiodes are 1 pixel (col. 4, lines 45-50). Therefore, it would be obvious to one skilled in the art at the time that the third embodiment comprises an array of two pixels, for the embodiment comprises an array of two pin photodiodes.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

9. **Claims 4 and 9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to overcome any objections as stated above.

As to **claim 4**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a coordinate input apparatus in which light from a designating tool is applied to a prescribed position on a coordinate input screen to produce a beam spot and coordinates corresponding the beam spot are generated "said correction means corrects the results of sensing from each of said plurality of sensing means based upon inclination of a second sensing means

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relative to a first sensing means among said plurality of sensing means, in combination with the rest of the limitations of **claim 4**.

As to **claim 9**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a coordinate input method in which light from a designating tool is applied to a prescribed position on a coordinate input screen to produce a beam spot and coordinates corresponding to the beam spot are generated “said correction step corrects the results of sensing from each of the plurality of sensing units based upon inclination of a second sensing unit relative to a first sensing unit among the plurality of sensing units”, in combination with the rest of the limitations of **claim 9**.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

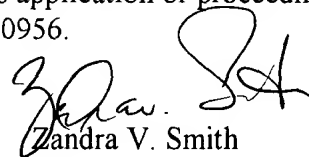
This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 308-7722

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (703) 305-4787. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

DJ
gs
May 13, 2003


Zandra V. Smith
Primary Examiner
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